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ABSTRACT

The news gathering behaviors of 24 mass media science writers were examined at individual (occupational) and organizational levels through personal interviews, observation at the annual meeting of the American Association for the Advancement of Science, and content analysis of the stories produced. Data indicated that organizational constraints were the major factors determining news selection strategies, but that individual-level variables come into play at both the information gathering and the writing stages. Greater numbers of organizational constraints seemed to reduce the roles that individual-level variables have in the news making process for a given reporter. Additionally, organizational variables seemed to promote competitive behavior, while individual-level variables encouraged cooperative behavior among the science writers in the study. (Author/RL)

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Theory & Methodology Division

The News-Gathering Behaviors of Specialty Reporters: A Comparison of Two Levels of Analysis in Mass Media Decision-Making

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The News-Gathering Behaviors of Specialty Reporters: A Comparison of Two Levels of Analysis in Mass Media Decision-Making

The growing sophistication of mass communicator research in recent years has brought with it an accompanying expansion in theoretical perspectives. Researchers have begun to identify both microsocial and macrosocial levels of analysis, and several investigators also have begun calling for a "systems" approach to the study of news-making.[1]

This paper supports the argument for such an approach, which would integrate levels of analysis, and offers an example of the kind of study that seems to accomplish this goal on a limited scale.

Multilevel systems of analysis.

Studies of news gathering behaviors can be carried out at any number of levels of analysis, ranging from the micro (the individual) to the macro (societal).

Historically, emphasis among researchers in the United States has focused on the individual. Studies of gatekeepers, of beat reporters, of publishers all accepted the assumption that news-making took place primarily at a molecular, psychological level.[2]

Within the last few years, however, the level of analysis has begun to move upward, and a number of researchers now argue that news-making is largely an organizational

phenomenon, governed by such variables as organization size, technological limitations and demands of work settings.[3] Others suggest an even more molar theoretical framework that takes into account interactions among organizations as well as interactions between an organization and its social or political milieu.[4]

The resulting variety in theoretical approaches now being posed to deal with news-making behaviors bears a striking resemblance to the range of perspectives that has evolved in sociology to explain social structures. As American sociologist Peter Blau noted in a recent book devoted to a discussion of these various theoretical strategies: One important difference in perspective, though not the only one, is the range of our vision, whether we view things from a distance to encompass the larger picture or whether we stand close up not to lose sight of details.[5]

But one problem with a number of the theoretical perspectives on social structures--both in sociology and in mass communications--has been that they limit themselves to a single level of analysis. Gatekeeper studies, for example, rarely consider the more macro organizational variables, while organizational studies are not likely to step down to individual units of analysis. Blau argues that many of the prevailing sociological models of social structure suffer from the same problem:

> A sociological perspective designed to reveal the broad panorama of historical developments and institutional systems conceals the minutiae of the

> social life of individuals, and a perspective suited for penetrating deeply into human relations and face-to-face interaction loses sight of the larger historical and institutional context.[6]

One way around such a limitation, of course, is to incorporate a number of levels of analysis into any one structural study. Sociologists Robert Merton, Seymour Martin Lipset and Blau, among others, have worked to derive theoretical models that can encompass both microsocial and macrosocial phenomena,[7] and within the last two or three years mass communication researchers also have come forward with recommendations for multilevel models.

For example, Dimmick argues that decision-making in mass media must be viewed from a "systems" perspective that arranges levels of analysis hierarchically, from the micro, individual level ("How do individual gatekeepers make decisions concerning media content?") to the macro ("How does the society define and constrain the activities of its mass communication institutions and specialists?"). He suggests eight levels of analysis.[8]

Hirsch has reviewed much of the extant literature in the communicator area and isolates three levels of analysis that he feels characterize the work done to date. He calls the most micro level "occupational roles and careers," a second level "organization qua organization," and the most macro level the "interorganizational and institutional perspective."[9] The first uses the individual as the unit of analysis, the second the organization, and the third

focuses on relationships between media institutions and society.

Although Hirsch does not weave a single multilevel model from the three perspectives, he does argue that the three levels of analysis should be integrated:

> These models, while analytically distinct, are not mutually exlusive. Rather, they work best when taken together, with each helping the others present alternative interpretations of findings or raise new questions for investigation. They are further interrelated in that the first examines how individuals work to create mass media content, while the second focuses on the organizational arrangements within which this occurs, and which corporately produce and distribute the finished product. The third is most useful for studying the cultural, economic, and political environments in which mass media and the professions comprising them act as a major social institution.[10]

Given the complexity of news-making, multilevel analysis in communicator research makes a great deal of sense. The difficulty lies in applying multilevel models to actual news production situations. This paper proposes one such application by suggesting that the existence of specialty reporters in mass media offers an opportunity to examine the interactions of two levels of analysis--individual and organizational--in a news-gathering setting. The paper then explains one such attempt and briefly discusses the findings.

A proposed research setting.

One can assume that news-making decisions are made at both individual (occupational) and organizational levels of analysis (although not exclusively at those levels). The problem lies in designing studies that allow us to

view the two levels operating together while still enabling us to isolate and examine the part each level plays in producing the final product.

Since both individual and organizational variables must serve as independent variables in such a study, it is important to find a setting outside the newsroom where both can be observed and measured. One such setting would be an actual news event. If the event draws journalists from a variety of organizations, variance within organizational variables will be obtained. The problem then lies in obtaining individual-level data that are as independent as possible of the organizational measures. To do this, I would argue that one needs a group of journalists engaged in the same kind of reporting occupation who are capable of exercising a great deal of autonomy from the newsroom, reporters who may value their associations with like reporters from other organizations as much as they do their relationships with their own editors. Specialty reporters seem to fit those criteria.

Earlier studies of specialty reporters by Rosten, Tunstall, Crouse and Chibnall,[11] among others, have indicated that these reporters have certain things in common that bind them together. They deal with specific areas of coverage and develop expertise well beyond that of the average reporter. As a result, they enjoy a great deal of autonomy from newsrooms; editors often don't feel qualified to judge the newsworthiness of information in

the specialty writer's area, rendering the writer both reporter and editor, for all practical purposes.

Specialty writers often specialize in content areas rather than geographical ones. Thus for them a beat can be regional, national, even international in scope. In a large news organization, this means the specialty writer travels more than most reporters, and her travels bring her into regular contact with other reporters in the same specialty area with similar occupational titles and responsibilities. The result is socialization not only to the newsroom but also to experienced colleagues from other news organizations.

Another component of specialty reporting is a strong professional concern for a quality writing standard that may be quite independent of newsroom requirements. In other words, specialty reporters are highly concerned about the intrinsic quality of the stories they produce vis-a-vis each other, about whether they are doing good or bad specialty writing in the eyes of their peers.

In sum, the news-making behaviors of specialty reporters, while governed to some extent by the organizational dictates of reporters' respective newsrooms, also should be influenced by the network of individual relationships maintained among professional colleagues involved in the same specialty occupation but from other newsrooms. One ideal setting, then, for comparison of the effects of individual and organizational variables on news-gathering behaviors would be a large news

"event" that attracts specialty journalists from a wide range of media organizations.

The author was able to gather data in just such a setting and presents the findings in the form of a case study. The event: a meeting of the American Association for the Advancement of Science. The journalists: the top mass media science writers in the United States.

A Case Study

Background.

Science reporters provide us with what is perhaps the most ideal example of specialty reporting in the mass media. These journalists deal with highly technical information, so technical in fact that scientists (who serve as the major sources) are often described as speaking foreign languages that must be "translated for public consumption.

Editors thus seem to interfere rarely with either news decisions or writing style. Autonomy from the news desk is great. For example, in this study more than half the science writers indicated they receive assignments from their city editors only 10 percent of the time or less. Additionally, more than half of them said their copy is rarely edited and that they are consulted by their editors about the advisability of publishing science stories other than their own. A few newspapers, in fact, such as the New York Daily News, have rules prohibiting the publication of any science story unless it has been checked by the newspaper's science writer.

In larger newspapers the science-writing beat has traditionally been defined as a national or international beat, giving the science writer a great many opportunities to stay away from the city room. Historically, science writers were brought on board in many newspapers specifically to handle one of the biggest stories of the last couple decades: man's journeys to the moon. That story could not be covered from the city room, so many of today's more experienced science writers began their careers on the road. Today, although space shots are much less a part of the beat, science writers for the more prestigious media still travel regularly. In this study more than a third of the respondents said they are on the road at least eight to 10 times a year, while the rest indicated they travel five to eight times a year. Most of the travel funds now are spent going to scientific meetings.[12]

Lastly, mass media science writers have developed a high degree of occupational professionalism. The difficulties of covering science and the frequent patterns of interaction among the journalists are among the factors that have brought about two kinds of organizations within this occupational subgroup: a formal organization called the National Association of Science Writers, Inc., and an informal "inner club" of journalists whose members are considered the elite among mass media science writers.

The formal organization, begun in 1934, currently has about 1,000 members, about 40 percent of whom report for

newspapers, magazines, television or radio.[13] NASW seems devoted primarily to maintaining professional standards. For example, a mass media science writer must have two full years of working experience before he or she can apply for membership. Association activities emphasize improving such things as one's scientific expertise, understanding of science writing as an occupation, and members' information-selection and writing skills.[14] Lastly, NASW emphasizes mass media professionalism through its operating structure: although most of its members do not write regularly for mass media (they are public information personnel, free-lance writers, academics), power within the organization remains in the hands of the mass media minority. NASW has two categories of membership--active and associate--and only mass media science journalists qualify for the former. Associate members cannot hold office in the organization, nor can they vote on matters of organizational concern.[15]

The informal "inner club," on the other hand, seems to be very much a product of science writers' constant interactions on the road. Over time, those science writers who do travel regularly and who have been doing so since the glories of the manned space program in the 1960s have developed close personal as well as professional bonds. No more than 25 or 30 in number, they work for the prestigious media in the country and count on meeting each other regularly at events like coverage of the 1976 Viking landings on Mars from California laboratories or at large scientific

meetings. One inner club member in the study characterized the cohesive spirit of this group when he acknowledged:

> We see more of each other because of going to these meetings, covering these stories. You're with each other for several days at a time, most of the day and most of the evening, you tend to go out and eat dinner together. So you get to be very good friends. You've got a common interest....I have more in common with science writers from other papers than I do with reporters here on the _____, because we're covering the same stories, we interview the same people, and we see each other not just casually. So we all get to be pretty good friends.

Unlike the formal NASW, this informal group coalesces only when its members physically gather at news events away from the city room. Thus it seems to have a function regarding news-gathering behavior. Describing that function was a main aim of this study and will be discussed later.

In summary, mass media science writers are excellent subjects for a study of this type because they evidence a great deal of autonomy from the newsroom and a corresponding strong occupational bond among one another. Among specialty reporters, science writers may provide us with occupational measures that are most independent of organizational ones.

The annual meeting of the American Association for the Advancement of Science (AAAS) was an ideal site for three major reasons:

1. It regularly attracts between 300 and 600 science journalists from a variety of media organizations to cover it. In fact, the meeting is such an annual staple for mass media science writers that NASW has begun holding its annual business meetings there.

2. The meeting usually lasts five or six days and thus provides an excellent laboratory for display of variance in organizational measures. For example, a reporter could come with daily deadline requirements or with instructions to write only when he or she found something of interest. Such differences could result in strikingly different production outputs over a six-day period.

3. As one of the largest scientific gatherings in the United States, regularly attracting more than 5000 scientists and offering some 130 symposia, the AAAS meeting confronts the journalist with a bewildering array of people and topics. He or she must make choices, and AAAS makes a sophisticated attempt to affect those choices via a system of press conferences.[16] Since heavy deadline and other organizational pressures may make reporters more dependent on such artificial structures, the presence of the press conferences offered a handy tool for measuring the effects of the two independent variables.

Research question.

The goal of this study, then, was to determine how occupational and organizational variables affected news-making decisions of the science writers.

Occupational variables were operationalized in terms of the extent of peer interaction among science writers at the meeting, the degree to which individual decisions as science writers affected the stories produced.

Two types of organizational variables were selected for examination: those relating to job demands of different kinds of media organizations and those relating to technological differences among media.[17] Two kinds of job demands were included: the number of deadlines a reporter had to meet in the course of the meeting, and his or her behaviors related to awareness of competition among media organizations represented at the meeting. The technological variable was operationalized in terms of the amount of equipment needed by a reporter to cover the meeting and his or her attendant scheduling needs. This last variable essentially differentiated between type of medium.

The dependent measure--news-gathering behavior--was operationalized in two specific ways for purposes of this case study: type of news source and number of sources used per story.

These two operationalizations were selected because they made comparison of effects of the two independent variables on reporters' abilities to select and gather news fairly straightforward.

For example, for any given story a science writer had four major types of information sources at his or her disposal: news conferences, research papers, actual meeting symposia and, finally, any individual contacts (interviews) that the reporter would initiate with scientists. Heavy use of news conferences would indicate a good deal of reporter

dependence on outside (AAAS) help in news selections, while reliance on papers, symposia and reporter-generated interviews would be measures of individual independence. If a reporter were under such heavy organizational constraints as a large number of deadlines, one would expect him or her to be more dependent on press conferences than would the reporter with the time and freedom to make individual choices. The latter should make far more use of papers, symposia and interviews.

One also would expect variance in numbers of sources used per story. Science writers concerned about the quality of science writing in general argue that single-source stories are too superficial, that "good" science writing must communicate complex material in some depth, a task that requires multiple-source stories.[18] Thus individual/occupational norms should encourage multiple-source stories. But such organizational restraints as daily deadlines should push a reporter in the opposite direction, toward quick and easy single-source stories. By analyzing number of sources per story, then, one should be able to see effects of the two levels of variables. In this analysis, stories are classified as single-source, double-source or multiple-source (three or more sources) stories.

Method.

Data were collected in four phases during late 1976 and throughout 1977: (1) inner club and non-inner club

science writers were interviewed about their work. (2) the news-selection behaviors of the reporters were observed at the 1977 AAAS annual meeting; (3) all stories about the meeting published in daily newspapers and magazines were content analyzed; and (4) followup interviews were conducted with respondents.

To isolate those mass media science journalists who make up the inner club, three newspaper science writers who have held leadership positions in NASW and four public information persons who work for national scientific institutions and thus come into regular contact with the inner club were asked to list journalists who they felt were inner club members.[19] The lists were merged and the journalists ranked according to the number of times they were mentioned. Those named by four or more persons were considered the most likely candidates for inner club status, and interviews were obtained with all such individuals who indicated they were likely to attend the AAAS meeting.

Twenty-four science journalists were involved in all phases of the study. Of the 24, 17 were identified as inner club members and seven as nonmembers (see Tables 1 and 2). As the inner club numbers no more than 25 or 30 members, the 17 represent the majority of the club and included all inner club members who attended the meeting. The seven non-inner club members were included to provide perspectives on the inner club from individuals outside the group.[20]

TABLES 1 AND 2 ABOUT HERE

Phase 1: Face-to-face interviews were conducted with journalists in the sample to obtain self reports about their perceived news-gathering behaviors, particularly at an AAAS meeting.

Phase 2: Four persons trained in observational techniques attend the 1977 AAAS annual meeting, held 21-25 February in Denver, to observe the science writers' actual news-gathering behaviors.

Phase 3: AAAS hires a clipping service to monitor coverage of the annual meeting in all daily newspapers and news magazines in the country.[21] All 772 stories identified by the service through May 1977 were collected and content analyzed with the story as the unit of analysis. Emphasis in the analysis was on story subject and perceived sources of information.

Phase 4: Following the content analysis, all journalists in the sample who had covered the meeting[22] were contacted by telephone and asked to discuss in detail their reasons for selecting topics and sources for each story.

The goal of this multimethodological approach was to obtain different measures of the same concepts: to find out how science writers perceived their newsgathering behaviors, to observe the behaviors themselves and finally to analyze the effects of the behaviors on the final news product.

Study findings.

Most of the numerical analyses presented below are based on data from the 19 journalists in the study who attended the meeting. Other findings are based on the full sample of 24 who were interviewed and on observational data from the meeting.

Within the meeting context one could readily see both occupational and organizational variables affecting the final product. The interesting thing to note about the following discussion is that the two levels, rather than supplementing one another, seemed to conflict. The stronger the level of one set of variables, the weaker would be the other. We will look at each level briefly:

Organizational variables. Organizational constraints proved to be the more powerful determinants of news-gathering behaviors. Three types of organizational constraints will be discussed here: number of deadlines, the pressures of perceived competition, and technological differences between organizations.

Deadline pressures. The more stories a reporter was expected to write, the more likely he or she was to rely on the press conferences as an efficient means of gathering information. In fact, there is a startling difference between the number of press conferences attended by constrained reporters (reporters who had to produce at least one story a day at the meeting) and the number attended

by reporters with few deadlines restraints (see Table 3). Similarly, the constrained science writer utilized press conferences as story sources far more often than any other source, while reporters with few or no deadlines were more likely to have gone to a meeting symposium or obtained an interview with a scientist.

TABLE 3 ABOUT HERE

Deadline constraints also seem to have been major factors governing the number of sources used for a story. More than 50 percent of the stories produced by reporters with daily deadlines were single-source stories, while the majority of stories written by journalists with fewer deadlines used two sources (see Table 4). While reporters with many deadlines did few multiple-source stories, less constrained reporters were more likely to write multiple-source stories than they were to do single-source stories.

TABLE 4 ABOUT HERE

Thus the time constraints imposed by organizations requiring daily stories forced reporters into a pattern of single-source or double-source stories that were based in great part on press-conference information. As one respondent noted: "Press conferences are vital. If you've got to produce a story every day, that's the way you going to get it."

For these reporters, AAAS could play a large part in determining what was news about its own meeting.

Eliminate daily deadlines, on the other hand, and the journalist seemed to shake loose from the press conference and instead began gathering information from the meeting itself, via symposia. With fewer stories to do, he or she could pick topics more carefully and could utilize a number of sources for any one story.

Competitive factors. Competition proved to be another variable that increased reporter dependence on press conferences. What is interesting about this variable is that it was perceived by reporters as an organizational rather than an individual constraint.

When reporters from a variety of media come together at an event, one would think that competition would be operationalized individually, with one reporter viewing himself as pitted against another. As members of the prestige press, inner club members particularly should perceive themselves as each other's main competition, since their newspapers - the New York Times, the Washington Post, the Philadelphia Inquirer, etc. - indeed do so.

But respondents in this study viewed competition not as a journalist-vs-journalist battle but rather as a newspaper-vs-newspaper situation. Rather than pitting themselves against colleagues, they perceived competition primarily as something their editors felt, as an organizational

constraint that must be satisfied. Competition meant that their editors were guaging the quality of their work not on the basis of reporter originality but on the basis of what the competing newspaper or wire service was producing ("Here's an AP story on the Martian moon. Did our man get that?"). So the solution was not to operate individually but to produce copy that satisfied perceived needs of a kind of "collective" newsroom.

Science writers could minimize complaints from their city rooms, then, not by scooping each other on stories (which in fact would have increased complaints) but by duplicating each other. And press conferences provided the best place to accomplish this. If all journalists cover the same story, there is no question about whether one "got" the story for that day. Reporters, rather, created the story for the day en masse. As one respondent explained:

> I go to a press conference because I don't want to be surprised the next day by seeing that somebody else picked up a big story that I missed. I know what newspapers my editors watch, too. If (the competition) files a story, I want to be sure I don't get a call the next day (from the desk wondering) why I didn't write it. I know that they've seen the wires and I'm out there (at the meeting). So there's a bit of self protection.

Thus the more a reporter felt his or her editor was watching the production of other reporters from competing organizations, the more likely that reporter was to try to duplicate that production.

Technological differences. Observational data indicated that type of medium did have an effect on reporter

independence from AAAS. Journalists with a great deal of equipment and complicated schedules were more likely to rely heavily on AAAS for story ideas, sources and arrangements. Local television and radio reporters in Denver were by far the most dependent on the scientific institution they were covering for news direction. These reporters were frequently observed asking AAAS personnel to give them "a couple good ideas" for stories for the next day. Of course one must acknowledge that broadcast journalists also are less likely to be skilled in science coverage and thus more dependent on outside assistance, but even that factor can be viewed as an organizational constraint since broadcast media traditionally have been much less likely to field specialty reporters than have print media.

Occupational factors. The peer interaction afforded by close reporter ties did not seem to have much of an effect on story selections. Most inner club members were under the same types of organizational deadline constraints as were non-members, and production of daily stories made them just as dependent on press conferences (see Table 3). The only difference in source usage seemed to be that inner club members, when writing single-source stories, were just as likely to use scientific papers as they were press confernecs, while non-members relied primarily on press conferences and secondarily on interviews for their single-source stories (see Table 5).[23] So whether or not one was an inner club

member made little difference in one's dependence on AAAS for story selection guidance: everyone relied on the press conferences.

TABLE 5 ABOUT HERE

Occupational-level interactions did seem to have an effect, however, on the accuracy and overall quality of stories produced. For all practical purposes, the inner club at an event like the AAAS meeting serves its constituents as a large pool of resources. Inner club members shared information, provided each other with technical definitions and warned one another away from suspicious sources and unsubstantiated research reports.

In one instance at the 1977 meeting, for example, an inner club member came away from a press conference about the Martian moon Phobos with the idea that the tiny moon harbored huge reserves of oil. Other club members quickly checked out that possibility and warned their colleague that this conclusion was not substantiated by the research presented. The reporter subsequently downplayed the potentailly misleading "little Saudia Arabia" theme in his story.

In another example, inner club members were among reporters at the 1978 AAAS meeting in Washington, DC, who attended a press conference at which a California scientist presented findings of a study of Seventh Day Adventists

indicating that eating meat decreases life expectancy and increases the chances of heart attacks and cancer. Although several inner club members seemed interested in the story, at least two reporters warned their colleagues that the study could have serious methodological flaws and to approach the story cautiously. A number of club members investigated that problem and subsequently decided not to write the story.

Thus while access to the expertise of other science writers--one benefit of the inner club--did not have a substantial effect on a reporter's dependence on press conferences, it did seem to enhance his or her ability to be critical of the scientific information presented in those press conferences.

Discussion.

In this particular news situation, then, organizational variables seemed to be the primary determinant of story selections and, to some extent, of information gathering, Occupational-level variables came into play at a secondary level. Once a topic was chosen, reporter interaction was utilized to maximize the scientific quality of the story itself.

As I noted earlier in the paper, the two levels of decision-making do not seem to compliment each other. Increased organizational requirements brought about increased dependence on an artificial press conference structure

erected by the institution, promoted a greater degree of homogeneity in story topics and made more likely superficiality of information via fewer sources, shorter articles, etc. The greater the organizational restraints, the lesser role occupational variables seemed to play in the news-gathering and structuring process.

On the other hand, as organizational constraints decreased, occupational factors became stronger. Reporters with fewer deadlines, under less competitive strain, and who worked for print organizations exercised greater individual control over story selections, attended the meeting itself rather than the press conferences, and obtained greater story depth through multiple sources.

In many ways, then, the two levels of decision-making examined here seemed to be in direct conflict with each other. Respondents did not seem to be aware of this conflict, perhaps because organizational constraints like the ones examined here are "givens" in the reporting business. They may be such strong determinants of behavior, in fact, because the science writer does not question the daily deadline or competitive premises but rather assumes the constraints as part of the job.[24]

Yet the two levels did not seem to supplement one another for the reporters studied in this meeting context. Organizational constraints in this study were geared toward manufacturing a product within a specified time with a hard

news peg, a product that qualified as a bona fide story because other science writers did it, too. Occupational/professional factors, on the other hand, emphasized "good science writing" via information accuracy and legitimacy.

Organizational variables emphasized the competitive aspects of reporting while individual-level variables emphasized cooperative aspects. In fact, the inner club seems to have evolved in part to make cooperation a legitimate tactic for science writers in certain news-gathering situations. In contexts away from the competitive city room, the inner club sanctions cooperation with one's main competitors (as long as they, too, are members) in the interest of ultimate product quality. By turning what should be a highly competitive situation into a highly cooperative one, then, the club allows the science writer to meet the demands of his or her newsroom organization without sacrificing the strong personal and professional relationships that have developed among occupational colleagues.

Conclusion

Multilevel models of decision-making have obvious applications to understanding news-making behaviors in the mass media. The problem lies not in accepting such models but in applying them to actual research situations. The mere fact that decisions at various levels will be highly interrelated makes it difficult to devise variables that can be measured independently at each level. In this paper I present one

research design that makes an attempt at such independent measurement. Hopefully evolving multilevel models in our field will stimulate others to design strategies to accommodate more than two levels of analysis.

Footnotes

[1]See, for example, Paul M. Hirsch, "Occupational, Organizational, and Institutional Models in Mass Media Research: Toward An Integrated Framework," in Paul Hirsch, Peter Miller and F. Gerald Kline, eds., Strategies for Communication Research, vol. 6 of Sage Annual Reviews of Communication Research (Beverly Hills: Sage, 1977) pp. 13-42; and John W. Dimmick, "Levels of Analysis in Mass Media Decision-Making: A Taxonomy and Research Strategy," paper presented to Association for Education in Journalism, Seattle, Wash., August 1978.

[2]Typical of the methodologies used in many of these studies was that of the original gatekeeper piece, David M. White, "The Gatekeeper: A Case Study in the Selection of News," Journalism Quarterly 27:383-390, Fall 1950.

[3]See, for example, D. Charles Whitney, "'Information Overload' in the Newsroom: Two Case Studies," unpublished dissertation, University of Minnesota, 1978; Edward J. Epstein, "News From Nowhere," in Gaye Tuchman, ed., The TV Establishment: Programming for Power and Profit (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1974) pp. 44-52; Gaye Tuchman, Making News: A Study in the Construction of Reality (New York: Free Press, 1978); and John W.C. Johnstone, "Organizational Constraints on Newswork," Journalism Quarterly 53:5-13, Spring 1976.

[4]See, for example, H. Molotch and M. Lester, "News as Purposive Behavior: On the Strategic Use of Routine Events, Accidents, and Scandals," American Sociological Review 39;101-112, 1974; and G. Donahue, P. Tichenor and C. Olien, "Gatekeeping: Mass Media Systems and Information Control," in F.G. Kline and P.J. Tichenor, eds., Current Perspectives in Mass Communication Research, vol. 1 of Sage Annual Reviews of Communication Research (Beverly Hills: Sage, 1972) pp. 41-69.

[5]Peter M. Blau, "Introduction: Parallels and Contrasts in Structural Inquiries," in Peter M. Blau, ed., Approaches to the Study of Social Structure (London: Open Books, 1975) p. 3.

[6]Ibid. p. 4.

[7]Blau, op. cit.

[8]Dimmick, op. cit.

[9]Hirsch, op. cit.

[10]Ibid., p. 18.

[11]Leo Rosten, The Washington Correspondents (New York; Harcourt Brace, 1937); Jeremy Tunstall, Journalists at Work (London: Constable, 1971); Timothy Crouse, The Boys on the Bus (New York: Ballantine Books, 1973); Steve Chibnall, Law-and-Order News (London: Tavistock Publications Limited, 1977).

[12]However, science specialty writers still take off on more exotic trips as well. Most of the science writers in this study had been to Antarctica to cover U.S. research there. Walter Sullivan of the New York Times has traveled to Antarctica so many times (five), in fact, that a ridge there has been named after him. Other science writers have accompanied geologists on diving trips throughout the world's oceans; still others have followed anthropologists on treks to Africa in search of early man. American science writers even covered scientists' searches for the Loch Ness monster in Scotland in recent years. In a sense, then, science remains an international beat for a number of the more prestigious media.

[13]National Association of Science Writers, Inc. "Membership List," mimeo, July 1978.

[14]The organization works to increase expertise by offering regional luncheons with scientific speakers and, in connection with the Council for the Advancement of Science Writing (an independent offshoot of NASW), sponsors an annual Horizons of Science meeting, where science writers are brought together with scientists in the forefront of various research fields. The organization emphasizes unique aspects of science writing as an occupation through its quarterly newsletter, where ethics of the business are often discussed. Information sources for science writers and aspects of writing about science also are treated in the newsletter, and annotated bibliographies and other reference data are sometimes provided.

[15]According to "Introduction to NASW," a pamphlet produced by NASW, active members "must be principally engaged in reporting science through media that reach the public directly: newspapers, mass-circulation magazines, "trade" books, radio, television and films." Associate members, on the other hand, "report science through special media: limited-circulation publications and announcements from organizations such as universities, research laboratories, foundations and science-oriented corporations" (p. 8). The imbalance of power has generated a low current of discontent for years within the organization.

[16]One of the main goals of AAAS as an organization is to increase public appreciation of the importance of science to human progress. So the institution is interested in attracting as much coverage of its meeting by journalists as possible. Toward that end, AAAS has constructed a public-information apparatus for its annual meeting that is perhaps more sophisticated than that of any other meeting. It is highlighted by a series of press conferences that continues from the beginning of the six-day meeting to its end. Journalists literally do not have to leave the press area to "cover" the meeting, since public information personnel provide scientists and scientific papers on the hourly basis.

[17]For a discussion of these and other variables relevant to studies of news organizations, see Lee B. Becker, "Organizational Variables and the Study of Newsroom Behavior: A Review and Discussion of U.S. Research," paper presented to the International Association for Mass Communication Research, Warsaw, Poland, September 1978.

[18]Several respondents in this study, for example, noted that they write fewer single-source stories now than in the past. One explained that rather than produce such limited stories, she now takes the information home from the meeting with her where she will have the time to contact other sources and produce "trend" stories or "analysis" stories.

[19]Individuals providing lists of science writers were David Perlman, then science editor (now city editor) of the San Francisco Chronicle; Ed Edelson, science editor of the New York Daily News; Ron Kotulak, science editor of the Chicago Tribune; Don Phillips, senior project specialist for the American Hospital Association; Audrey Likely, director of public relations for the American Institute of Physics; Dorothy Smith, manager of the news service for the American Chemical Society; and Carol Rogers, public information officer for AAAS.

[20]The non-inner club respondents were journalists ranked by three or fewer persons on the list who planned to attend the AAAS meeting and who worked for media comparable in size and prestige to those employing inner club reporters.

[21]AAAS subscribes to the Washington, DC-based Press Intelligence, Inc.

[22]Of the 24 journalists in the sample, five did not attend the meeting for various reasons. They were David Perlman, San Francisco Chronicle; Joel Shurkin, Philadelphia Inquirer; Jerry Bishop, Wall Street Journal; Michael Woods, Toledo Blade; and Bob Gillette, Los Angeles Times.

[23]One interpretation of this greater reliance on research papers favors the notion that greater occupational interaction increases independence in story selection: inner club members collectively know more about science and thus are better able to understand a scientist's research paper and use it for a story if need be. This may have been true in part. But observational data indicated that reliance on papers at this meeting as sole sources for stories was more a function of organizational constraints. If one could understand a research paper, it was a much quicker and more readily available story source than any other. And most of the papers that served as sole story sources were, in fact, social science reports, accounts that any reporter attending the meeting probably could have understood to some extent. The major reason for using the papers as single sources, in this instance, seems to have been organizational.

[24]Interestingly, although science writers in this study expressed little awareness of organizational constraints before the fact, the NASW Newsletter is rife with ex post facto discussions of how such factors affected story selections. For example, see Joel Shurkin, "The Science Writers Still Go to the AAAS Meetings; Some Answers to 'Why?'" NASW Newsletter 27:1-3, February 1979; or Charles Petit, "Mutant Depressive Gene Stampedes Writers at AAAS," NASW Newsletter 27:3-5, February 1979.

Table 1

Inner Club Members Interviewed

Name	Title	Affiliation
George Alexander	Science writer	Los Angeles Times
Jerry Bishop	Staff reporter	Wall Street Journal
Bob Cooke	Science editor	Boston Globe
Ed Edelson	Science editor	New York Daily News
Peter Gwynne	Science editor	Newsweek
Don Kirkman	Science writer	Scripps-Howard Newspapers
Ron Kotulak	Science editor	Chicago Tribune
John Langone	Medical editor	Boston Herald-American
Tom O'Toole	Science editor	Washington Post
David Perlman	Science editor	San Francisco Chronicle
Judy Randal	Science writer	New York Daily News
Joann Rodgers	Medical writer	Hearst Newspapers/ Baltimore News-American
Al Rossiter	Science editor	United Press International
Joel Shurkin	Science writer	Philadelphia Inquirer
Brian Sullivan	Science writer	Associated Press
Walter Sullvian	Science editor	The New York Times
Pat Young*	Science writer	The National Observer

n=17

*Since the demise of The National Observer in July 1977, Young has worked as a free-lance science writer in the Washington, D.C. area.

Table 2

Younger Journalists Interviewed

Name	Title	Affiliation
Ira Flatow	Science reporter	National Public Radio
Jon Franklin	Science writer	Baltimore Sun
Bob Gillette	Science writer	Los Angeles Times
Elizabeth Maggio	Science writer	Arizona Daily Star
Cristine Russell	Science/medical writer	Washington Star
David Salisbury	Science writer	Christian Science Monitor
Michael Woods	Science editor	Toledo Blade

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Table 3

The "Average Journalist: Mean Values on a Number of Production/Source Variables

	All (n=19)[a]	Status: Inner Club (n=14)	Status: Other (n=5)	Deadline Constraints: Many (n=14)	Deadline Constraints: Few (n=5)
Mean number of stories	6.5	6.5	6.4	7.6	3.4
Mean number of press conf's attended	6.4	6.5	6.0	7.7	2.6
Mean number of stories utilizing					
Press conf.	2.8	2.8	3.0	3.4	1.2
Symposium	1.3	1.2	1.6	1.1	1.8
Paper	2.4	2.6	1.8	2.9	1.0
Interview	2.6	2.3	3.6	2.3	2.2
Single Source	3.0	3.0	2.8	3.8	.6
Two Sources	2.5	2.6	2.2	2.8	1.8
Multiple Sources	.7	.5	1.2	.6	1.0

[a] n's indicate number of respondents in the respective subgroups.

Table 4

Percentages of Total Stories Written by Respondents That Utilize Single, Double or Multiple Sources

	All (n=117)[a]	Status		Deadline Constraints	
		Inner Club (n=86)	Other (n=31)	Many (n=100)	Few (n=17)
Single source	48% (56)	49% (42)	45% (14)	53% (53)	18% (3)
Two sources	41% (48)	43% (37)	36% (11)	39% (39)	53% (9)
More than two sources	11% (13)	8% (7)	19% (6)	8% (8)	29% (5)
	100%	100%	100%	100%	100%

[a]Although total number of stories produced by the 19 respondents at the meeting was 123, sources for six could not be determined.

Table 5

Percentages of Total Stories that Utilized Only Single Sources of Various Kinds[a]

Single Source	All (n=50)	Status		Deadline Constraints	
		Inner Club (n=36)	Other (n=14)	Many (n=48)	Few (n=2)
Press Conf. Only	40%(20)	36%(13)	50%(7)	39%(19)	50%(1)
Symposium Only	14%(7)	13%(5)	14%(2)	14%(7)	0%(0)
Paper Only	24%(12)	33%(12)	0%(0)	25%(12)	0%(0)
Interview Only	22%(11)	16%(6)	35%(5)	20%(10)	50%(1)
	100%	100%	100%	100%	100%

[a]Source of data is postmeeting interviews. n's are simply sums of stories utilizing only one particular source for respondents in the group.